Investigating populations - RECAPTURE

Your Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Form group: 10\_\_\_

**Aim**: To estimate the size of a population using capture-recapture method

**Materials:**

Coloured paper clips

magnet

**Method:**

- Count and record the total number of paper clips in a small handful (= t)

- Pick your favourite colour and count and record how many there are in total (= f)

- mix the paper clips and use the magnet to pick up 6 to 12 clips ('recapture')

- Count and record the total number (t) and the 'favourite' colour (f) you just 'recaptured' in the results table below

- Put the 'recaptured' clips back in the pile, randomise and repeat.

**Results**

Hi! My favourite colour of paperclip is \_\_\_\_\_\_\_ !

There are \_\_\_\_\_ (f) total number of this colour paperclips out of \_\_\_\_\_(t) total number of all colours of paperclips (including my favourite colour), therefore the REAL (known overall) percentage of my favourite colour is = (f / t) x 100% = \_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| Trial | Favourite colour | Total ‘recaptured’ | favourite / total x100% |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| 5 |  |  |  |
| Total |  |  |  |
| Average per trial |  |  |  |

**Questions/Discussion:**

How do your estimates compare with your known 'overall total'?

How could you get more accurate results?

What could you use this for in the real world?

**Conclusion:**

(Did you achieve your aim? How/why?)